

ABSTRACT

The present invention is a method of handling a wide range of dynamic groups of services where the makeup of the groups can be determined and changed while the application is running. This is mainly accomplished through a group proxy, which is generated at run time, and which handles interactions with groups of services on behalf of one or more clients. The group proxy consists of a group logic shell which contains all the group-aware logic, and a service proxy for each service in the group which contains the necessary logic to interact with the particular service. The group proxy, which is given to a client for all of its interactions with the group of services, buffers calls from that client to its group when the group is unavailable because it is in transition. When the transition is complete the group proxy transmits the stored client commands to the group. In the preferred embodiment of the invention, all the group-aware logic for a distributed computing application is provided in separate code modules, namely the group proxy, group service and grouping agent, thus relieving clients and services from providing this logic and maintaining the purity of the look-up service and other infrastructure services.